

Cat Scratch Disease
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For almost 100 years, cat scratches have been associated with illness in people. Cat Scratch Disease (CSD) is also called Cat Scratch Fever and benign lymphoreticulosis. While CSD is found all over the world, it is an uncommon disease. One estimate by the Centers for Disease Control found that there were 2.5 cases of CSD per 100,000 people per year in the United States. While multiple cases of CSD in one household can occur, this situation is rare. A study in Florida found that more than one member of a family contracted CSD only 3.5% of the time. The majority of individuals who contract CSD are under the age of 17, and are usually under the age of 12.

Typically, a small skin lesion (resembling an insect bite) develops at the site of a cat scratch or (less commonly) a bite, followed within two weeks by swollen lymph nodes and sometimes a fever. The illness is mild and self-limiting in the majority of patients, although it may take some months for the swollen lymph nodes to return to normal. Treatment is usually not required. Reports over the last few years, however, have extended the spectrum of problems associated with CSD to include such things as tonsillitis, encephalitis, hepatitis, pneumonia and other serious illnesses in a very small number of cases. People with compromised immune systems, such as AIDS and cancer patients, are most at risk and can become most seriously ill.

Diagnosis of CSD may not be easy. There is no simple diagnostic test. Most physicians rely on history of exposure to a cat, the presence of typical clinical signs, failure to find another cause, and examination of tissues, such as biopsy of a swollen lymph node. Other diseases, such as tuberculosis, brucellosis, and lymphoma, can cause similar symptoms. Over the years, the cause of CSD had remained elusive, although bacteria were commonly suspected to be the culprit. In 1988, a bacterium called *Afipia felis* was cultured from the lymph nodes of patients with CSD. In recent years, many studies have implicated the gram negative bacterium *Bartonella henselae* as the primary (but not the sole) cause of CSD. *B. henselae* is related to the agent of Trench Fever, *B. quintana*, a disease common in the trenches of World War I. Other *Bartonella* species may also be involved in CSD.

Cats are the main reservoir for *B. henselae*. Surveys for *B. henselae* antibodies in cats in the United States have found average infection rates to be from 25% to 41% in clinically healthy cats. The lowest rates were in the midwest and great plains regions (4-7%) and the highest were in the southeast (60%). Warmer, more humid climates are most supportive of fleas, which have been shown to transmit *B. henselae* from cat to cat. It appears that the majority of cats do not become ill when they are infected with this bacterium and kittens are more commonly infected than adults. Experimental infections

in cats, however, have caused a mild illness with fever, anemia, and transient neurological dysfunction. Once infected, cats carry bacteria in their blood for many months. It is important to note, however, that despite widespread presence of *B. henselae* in cats, CSD itself is uncommon. It appears that CSD is not easily acquired.

While most patients with CSD have a history of a cat scratch or bite, not all do. Some patients have had no contact with cats at all. This makes the exact modes of transmission unclear, although contact with infected flea dirt is suspected to play an important role. It is possible that CSD can also be contracted from environmental sources of the bacteria or from other animals. For this reason, the term “bartonellosis” is a better way to describe the variety of illnesses that are caused by *B. henselae*. Recently, it has been found that dogs can become ill with a related *Bartonella* species and the role of dogs as a possible reservoir for human infection is undergoing study.

CSD is primarily a concern in homes with immunocompromised people. Since kittens are more likely to carry *B. henselae* than adult cats, it is recommended that people with compromised immune systems adopt cats older than one year of age as pets to reduce the risk of contracting CSD. Any cat suspected of carrying *B. henselae* should be isolated from sick or immunocompromised individuals. Since carrier cats are always healthy and multiple cases of CSD within a household are rare, euthanasia of a suspected carrier is not warranted. Onychectomy (declawing) is also not recommended, since infection can occur without a cat scratch. As is always the case, any cut or scratch should be promptly washed with soap and water. In addition, children should be taught not to tease or annoy cats and rough play should be discouraged. Flea control is strongly recommended to help control risk of transmission between cats and from cats to people. A common sense approach is the best way to safeguard against CSD.

For more information:

Centers for Disease Control

<http://www.cdc.gov/healthypets/diseases/catscratch.htm>

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